



University of Groningen

The negative effect of red tape on procedural satisfaction

Kaufmann, Wesley; Tummers, Lars

Published in:
Public Management Review

DOI:
[10.1080/14719037.2016.1210907](https://doi.org/10.1080/14719037.2016.1210907)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2017

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Kaufmann, W., & Tummers, L. (2017). The negative effect of red tape on procedural satisfaction. Public Management Review, 19(9), 1311-1327. <https://doi.org/10.1080/14719037.2016.1210907>

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.



The negative effect of red tape on procedural satisfaction

Wesley Kaufmann & Lars Tummers

To cite this article: Wesley Kaufmann & Lars Tummers (2017) The negative effect of red tape on procedural satisfaction, Public Management Review, 19:9, 1311-1327, DOI: [10.1080/14719037.2016.1210907](https://doi.org/10.1080/14719037.2016.1210907)

To link to this article: <https://doi.org/10.1080/14719037.2016.1210907>



© 2016 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.



Published online: 27 Jul 2016.



Submit your article to this journal [↗](#)



Article views: 3265



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 7 View citing articles [↗](#)

The negative effect of red tape on procedural satisfaction

Wesley Kaufmann^a and Lars Tummers^{b,c}

^aDepartment of Accounting, University of Groningen, Groningen, Netherlands; ^bDepartment of Public Administration, Erasmus University Rotterdam, Rotterdam, Netherlands; ^cSchool of Governance, Utrecht University, Utrecht, Netherlands

ABSTRACT

In this study, we aim to replicate and extend the negative effect of red tape on procedural satisfaction by conducting an experiment via the online crowdsourcing service MTurk. Our findings indicate that a higher level of red tape is indeed associated with lower procedural satisfaction. We also find support for a statistically significant interaction between red tape and political ideology; the negative effect of red tape on procedural satisfaction is stronger for individuals with more conservative political views. These findings confirm the pathological nature of red tape and affirm the relevance of experimental red tape research.

KEYWORDS Red tape; experiment; replication; procedural satisfaction

Introduction

Red tape has become one of the key research topics in public administration (Bozeman and Feeney 2011). Red tape can be described as ‘rules, regulations and procedures that entail a compliance burden without advancing the legitimate purposes they were intended to serve’ (Bozeman 2000, 12). A variety of studies have disentangled red tape from formalization (Bozeman and Scott 1996; Pandey and Scott 2002), tested and retested red tape measures (Bozeman and Feeney 2011; Feeney 2012; Kaufmann and Feeney 2012; Pandey and Marlowe 2015), and compared red tape perceptions between public and private employees (Rainey, Pandey, and Bozeman 1995; Feeney and Bozeman 2009).

Despite these important contributions to our understanding of ineffective rules, the red tape literature is still characterized by methodological concerns (e.g. Bozeman 2012; Kaufmann and Feeney 2014). In line with public administration research in general (Lee, Benoit-Bryan, and Johnson 2012; Groeneveld et al. 2015), red tape scholars have overwhelmingly relied on cross-sectional survey data (Feeney 2012; Bozeman and Feeney 2011). However, a major drawback of these types of designs is that they do not allow for inferences of cause and effect (Brewer and Brewer 2011). A handful of experimental studies exist (Scott and Pandey 2000; Feeney 2012; Kaufmann and Feeney 2014; Tummers et al. 2016), but their main findings have

not been replicated in other contexts. This is where we seek to make our contribution.

Replication of experimental studies is crucial for moving the field of public administration forward, as this process strengthens the credibility of research (Nosek and Lakens 2014). Tsang and Kwan (1999) identify six different types of replication studies that can be used for verifying and generalizing prior research findings. According to Tsang and Kwan (1999), replication studies can use the exact same data set, a different data set from the same population of participants, or a different population of participants when compared with the initial study. Furthermore, researchers can employ the same or a different type of measurement and analysis for replication purposes.

Our focus in this study is on the negative effect of red tape on procedural satisfaction as found by Tummers et al. (2016) in their recent publication in *International Public Management Journal*. Satisfaction is an important indicator of firm performance in consumer research (e.g. Fornell et al. 1996) and public agencies increasingly make use of citizen satisfaction surveys as part of results-oriented management (e.g. Van Ryzin 2004). At the level of the individual, job dissatisfaction can lead to a wide range of negative outcomes that includes absenteeism and lateness (Farrell 1983). Hence, understanding the relationship between red tape and satisfaction has important implications for organizations and individuals alike.

Tummers et al. (2016) conducted a classroom experiment with Dutch students where subjects were asked to fill out a fictitious form for a passport renewal. A basic between-subjects design was used and the independent variable (red tape) was manipulated in order to test its effect on the dependent variable (procedural satisfaction). The treatment form contained a high level of red tape, which required participants to provide superfluous information, such as colour of eyes (which can already be deduced from the passport photo), whereas the control form was much more streamlined. The authors found that participants in the 'high' red tape condition were significantly less satisfied with the passport procedure than the 'low' red tape group.

Our goal in this study is to replicate and extend the negative relationship between red tape and satisfaction, as studied by Tummers et al. (2016) in the context of government–citizen's interactions. Specifically, we are interested in the effect of red tape on satisfaction in a different country (the United States versus the Netherlands), for a different population (online versus students) and in a different setting (an organizational promotion procedure versus a citizen passport renewal procedure). Furthermore, whereas Tummers et al. (2016) included knowledge of politics and emotional reactance as moderators in their setting of a passport renewal procedure, we include two different moderators that are particularly relevant in the setting of our organizational promotion procedure, namely managerial position and political ideology. Hence, we only replicate the main effect of red tape on satisfaction, and not the interaction effects as tested by Tummers et al. (2016).

We put forward an experimental research design that incorporates varying degrees of red tape in an organizational promotion procedure. In so doing, we are able to confirm if an organizational procedure that entails a high level of red tape results in lower perceptions of procedural satisfaction. In terms of the Tsang and Kwan (1999) typology, our study can be classified as an example of 'generalization and extension'. Hence, we aim to answer the following research question:

How does red tape influence procedural satisfaction, and to what extent is this relationship moderated by the individual's political orientation and work position (manager or not)?

The structure of this paper is as follows. In the following section, we first discuss the state of the art of red tape research. Next, we argue how the literature on procedural satisfaction can inform red tape research. We then present the data and methods, followed by the results section. We conclude with a discussion of our findings, limitations, and possible extensions of our research.

Literature and hypotheses

The red tape literature: Main findings and limitations

Early work on red tape has been published over 35 years ago, but most of the red tape literature has taken shape in the past two decades (Bozeman and Feeney 2011; Bozeman 2012). Starting point for contemporary red tape research is Bozeman's (1993) article in which the concepts of organizational and stakeholder red tape are introduced. Whereas organizational red tape is defined as '[r]ules, regulations, and procedures that remain in force and entail a compliance burden for the organization but have no efficacy for the rules' functional object' (283), stakeholder red tape acknowledges that the same rules can be red tape for some stakeholder groups, but not for others.

Stakeholder red tape can be considered a richer conceptualization than organizational red tape (Bozeman 1993), but it has not proven very popular in red tape research. The main reason for this is the potentially large number of rule stakeholders (Bozeman 2012). As a result, existing research has often operationalized organizational red tape by asking respondents to indicate on a 10-point scale: 'if red tape is defined as burdensome administrative rules and procedures that have negative effects on the organization's effectiveness, how would you assess the level of red tape in your organization?' (Rainey, Pandey, and Bozeman 1995, 574; see also Bozeman and Feeney 2011).

The general red tape operationalization put forward by Rainey, Pandey, and Bozeman (1995) has been used extensively in the literature. Consequently, red tape has been linked to such diverse topics as risk culture (Bozeman and Kingsley 1998), work alienation (DeHart-Davis and Pandey 2005), and public service motivation (Moynihan and Pandey 2007). Another stream of research focuses on political over-control as a source of red tape. Such external red tape has been found to affect Dutch primary schools (Torenvlied and Akkerman 2012), English local government authorities (Brewer et al. 2012), and research universities (Bozeman and Anderson 2016). Furthermore, a small number of studies have looked at the effect of red tape on clients (e.g. Scott and Pandey 2000; Moynihan and Herd 2010).

Recently, a number of studies have taken a first step towards conceptualizing and measuring red tape from a rule-based perspective. In essence, this perspective takes specific rules as a starting point, and subsequently derives subjective red tape measures from these rules. Studies in the so-called rule ecology domain look at red tape as a by-product of supranational, national, and organizational rule stock

increases (e.g. van Witteloostuijn and de Jong 2010; Kaufmann and van Witteloostuijn 2016). Kaufmann and Feeney (2012) use a combination of organizational rule counts and survey data to show that in the context of a large Dutch public organization, the objective number of rules does not correspond with red tape perceptions. Hence, more rules do not necessarily mean more red tape.

In an experimental study, Kaufmann and Feeney (2014) find that the degree of perceived red tape is not merely driven by the specific rule burden of a procedure, but also by the favourability of the outcome. In other words, when the outcome of a particular procedure is positive for a given stakeholder, then red tape perceptions will be lower, irrespective of actual rule burden. Finally, Pandey and Marlowe (2015) develop and test a so-called anchoring vignettes approach that can be used to improve survey-based red tape measures by having respondents' rate short stories about red tape.

In this study, we also conceptualize and measure red tape from a rule-based perspective. Specifically, by taking 'actual' rules as the focal point of our analysis, we are able to manipulate the degree of perceived red tape and the effect thereof on procedural satisfaction, to which we turn next.

Red tape and procedural satisfaction

The concept of satisfaction, which can be defined as an 'evaluative attitude towards some object or experience' (James 2009, 108), has been studied extensively in the public administration literature. For example, a large literature has looked at citizen satisfaction with public services (e.g. Van Ryzin 2004, 2006; Van Ryzin and Immerwahr 2007), while other research has provided mixed results on differences in job satisfaction between public and private workers (e.g. Schneider and Vaught 1993; Steel and Warner 1990; Wright 2001).

A limited number of studies have also explored satisfaction in the context of red tape. Townsend and Kosloski (2002) show that higher levels of red tape reduce client satisfaction with in-home respite and adult day care services. Giauque et al. (2012, 175) use survey data of 3,754 Swiss public servants to examine the effect of red tape on a specific type of job satisfaction, called 'resigned satisfaction', and identify a particularly strong correlation between the two. Furthermore, DeHart-Davis and Pandey (2005) find that organizational and personnel red tape is negatively related to job satisfaction. Of particular relevance in the current context is the study by Tummers et al. (2016), who show by experimentally varying the level of red tape in a fictitious passport application procedure that higher red tape levels result in lower citizen satisfaction.

Given our focus on specific rules and procedures, we are not interested in relatively broad satisfaction concepts such as general job satisfaction. Furthermore, the only experimental study on red tape and satisfaction to date has focused on citizens, whereas most red tape research is concerned with the adverse effects of organizational rules on employees and managers (Bozeman and Feeney 2011). As a result, our focus here is on the effect of red tape on procedural satisfaction, which is defined as the evaluative attitude towards *a particular process* (James 2009; Bergman et al. 2002). Based on the above, we hypothesize that procedural satisfaction will be lower if the level of red tape in a given procedure is higher. We expect that:

H1: Red tape has a negative effect on procedural satisfaction

Moderating variables: Managerial position and political ideology

In addition to the direct negative effect of red tape, we also want to test which individual factors may *moderate* the impact of red tape on procedural satisfaction (Giauque et al. 2012; Pandey and Scott 2002; Quratulain and Khan 2015). Indeed, Pandey and Kingsley (2000, 783) argue that ‘one is hard pressed to find serious students of red tape who do not, at some point or another, stress the importance of studying the individual in order to gain a better understanding of red tape’. We include two individual level factors that may moderate the negative relationship between red tape and procedural satisfaction, namely managerial position and political ideology (Moynihan and Herd 2010; Rudolph and Evans 2005).

The negative effect of red tape on procedural satisfaction is likely to be less pronounced for individuals with a managerial position for two reasons. First, managers may actually ‘use’ red tape in a strategic way. For example, red tape can be used as a managerial tool to delay promotions to other positions or departments within the organization of highly effective subordinates. Similarly, Moynihan and Herd (2010) argue that policymakers can further their own interests by creating red tape that deliberately limits political and social rights of specific citizen groups. More generally, the strategic use of red tape reflects the existence of different stakeholder groups and power coalitions within organizations. These groups may pursue very different and sometimes contrasting goals (e.g. Pfeffer 1992; Cyert and March 1963); red tape can be one of many strategic options for advancing a stakeholder’s own agenda.

Second, in certain cases, more burdensome promotion procedures also serve a legitimate organizational goal such as ensuring that legal standards are not violated (Gilliland, Benson, and Schepers 1998; Leventhal 1980). As Waldo put it (1946, 399): ‘one man’s red tape is another’s treasured procedural safeguard’, later reiterated by Kaufman (1977, 4) as: ‘one person’s red tape may be another’s treasured safeguard’. Such procedural safeguards are more likely to be valued by managers that are able to oversee the larger organizational picture, as opposed to employees that find themselves confronted with (perceived) excessively burdensome procedures blocking their individual promotion or pay raise.

Based on the above, we expect that the negative effect of red tape on procedural satisfaction in the context of a promotion procedure is less pronounced for managers. This leads to the following hypothesis:

H2: The negative effect of red tape on procedural satisfaction is weaker for managers

Next to analysing the moderating effect of a core situational characteristic (being a manager or not), we also analyse the role of a core attitude: political ideology, which can range from very conservative to very liberal. These ‘liberal/conservative self-identifications’ have been extensively studied in political science and related fields (Conover and Feldman 1981; Ross, Lelkes, and Russell 2012; Sibley, Osborne, and Duckitt 2012). Studies have linked political orientations to very diverse topics, showing that conservatives are more sensitive to disgust (Inbar et al. 2012), more intolerant for ambiguity (Jost et al. 2003), and have a larger amygdala volume (Jost and Amodio 2012).

In the context of core public management topics, it has been shown that liberals are more likely to self-sacrifice, which is a dimension of public service motivation

(Perry 1997). Furthermore, Piotrowski and van Ryzin (2007) find that both liberals and conservatives value transparency, but they value different types of transparency (e.g. conservatives value safety-related information more than liberals). To our knowledge, no existing studies have directly related red tape to political ideology. Yet, we expect that political conservatives are more sensitive to red tape than are liberals. Political psychologists and public administration scholars have argued that conservatives value efficiency and freedom more than do liberals (e.g. Skitka and Tetlock 1993; Rudolph and Evans 2005; Jacoby 2000; Lavertu and Moynihan 2013). Since red tape is mostly linked to managerial and political over-control, which limits both efficiency and freedom (Bozeman 1993; Bozeman and Feeney 2011), we expect red tape to have a stronger negative effect on satisfaction for individuals with a more conservative political ideology.

H3: The negative effect of red tape on procedural satisfaction is stronger for political conservatives

Data and methods

Setting and design

We test our hypotheses using the crowdsourcing service Amazon Mechanical Turk (MTurk), an online environment where researchers can posit experiments. Crowdsourcing studies are novel to public administration research, but quite common in other fields of research such as psychology and political science (Buhrmester, Kwang, and Gosling 2011; Berinsky, Huber, and Lenz 2012). An important advantage of crowdsourcing is that it allows the researcher to use a more heterogeneous respondent group than students (Germine et al. 2012). In their study entitled ‘Is the Web as good as the lab?’, Germine et al. (2012) conclude that data from MTurk is a source of high-quality data for cognitive and perceptual experiments that is similar to data collected in the lab.

Our experiment involved two treatments: a low and high red tape treatment, which is in line with Tummers et al. (2016). In both treatments, participants were shown a text about an organizational promotion procedure, as shown in the [Appendix](#). Our operationalization of red tape consists of two elements: procedural length and administrative delay (Kaufmann and Feeney 2014; Bozeman, Reed, and Scott 1992; Pandey and Bretschneider 1997; Bozeman and Kingsley 1998). The high red tape procedure is based on the second author’s experiences with actual organizational evaluation procedures in the public and private sector, and includes an extensive list of burdensome checks and balances. Specifically, the high red tape treatment consists of eight procedural steps and is said to take 18 hours to complete. By contrast, the low red tape treatment is much more streamlined, consists of just two steps, and is said to take 1 hour to complete.

The experimental design consisted of three parts. In the first part, participants were asked to provide some general information about themselves such as age, gender, and political ideology. The second part asked participants to answer a number of questions regarding their personality. In part three of the study, participants were randomly assigned either the high or low red tape text about the promotion procedure, and subsequently asked to answer a number of questions about this procedure with regard to red tape and procedural satisfaction.

The experiment was implemented in the online survey program Qualtrics. One of Qualtrics' features is random assignment of respondents to different treatments, which is an essential requirement for doing any type of experimental research. The Qualtrics survey link was included in the MTurk task, which is called a human intelligence task (HIT). When posting a HIT on MTurk, requesters can select criteria that respondents must meet in order to participate. For purposes of this study, we required workers to have a HIT approval rate of at least 95%, with a minimum of 1,000 approved HITs. Furthermore, to avoid any cultural bias in our study, workers were required to be US based. These are standard criteria (Berinsky, Huber, and Lenz 2012; Jilke, Van Ryzin, and Van de Walle 2016).

Workers were rewarded \$0.60 for completing our study, which was said to take roughly 10 minutes to complete (the final average completion time was 12 minutes and 34 seconds). To receive their reward, workers were given a three digit code at the end of the Qualtrics survey that had to be entered in the MTurk HIT. Again, this is common practice for MTurk studies (Buhrmester, Kwang, and Gosling 2011; Cohen, Panter, and Turan 2013).

Sample

In total, 178 MTurk users participated in our experiment. We deleted twenty-four participants as they did not fill out any of the dependent variables. To check if participants were paying attention during our experiment, we inserted the following attention check question in the survey (which was shown in a list of other items the respondents should answer to): 'Please do not provide a response here. This is to control for random answers'. Including a control question in an experiment is not only an effective way to determine if respondents are actively participating in the study, but also helps increase the attention of respondents as they do not know whether a similar question will appear later on (Peer, Vosgerau, and Acquisti 2014). As a result of this check, an additional thirteen respondents were deleted from the analyses. Hence, our final sample consists of 141 respondents.

We checked the sample for homogeneity for the potentially important background variables age, gender, managerial position, and political orientation that could influence procedural satisfaction. As shown in Table 1, 57per cent of the sample consists of females. Furthermore, the average age was 34 years, 28 per cent of the respondents had a managerial position and participants' political orientation was, on average, 3 on a 5-point Likert scale ranging from very left wing (1) to very right wing (5).

Table 1. Background characteristics of control and treatment groups.

	% Female	Age	Political preference (1–5 scale)	Managerial position (yes/no)
Control group (low rule burden)	59.09%	34.45	3.05	24.24%
Treatment group (high rule burden)	54.67%	33.28	2.87	32.00%
Mean	56.74%	33.83	2.95	28.37%
Difference tests	Chi-square = .002, <i>p</i> = .965	<i>F</i> = .420, <i>p</i> = .520	<i>F</i> = .479, <i>p</i> = .479	Chi-square = 1.040, <i>p</i> = .352

Measures

Procedural satisfaction was based on the American Customer Satisfaction Index scale as developed by Fornell et al. (1996) and applied by Tummers et al. (2016). The scale consists of four items with five response categories that ranged from ‘very dissatisfied’ to ‘very satisfied’. These items were adapted to fit the fictitious promotion procedure used in this study. The four-item scale had a reliability of .92 and adequate factor loadings, as shown in Table 2. The items were preceded by the text ‘The following questions ask you to indicate how satisfied you are with Organization Y’s promotion procedure.’

Managerial position was measured by asking respondents ‘Do you have a managerial position at work? (in other words, do you supervise others?)’, with ‘yes’ and ‘no’ as answer categories. Political ideology is measured by asking ‘In general, how would you describe your political ideology?’, with a 7-point scale, ranging from very liberal to very conservative (see also Baumgartner and Morris 2009).

Manipulation check

Before discussing the results, we need to confirm that participants assigned to the high red tape treatment (manipulation) perceived higher levels of red tape compared to our control group (who were assigned the low red tape vignette). To this end, we measured red tape in two ways. First, we used the general red tape scale of Rainey, Pandey, and Bozeman (1995), which was adapted to fit our promotion procedure and read: ‘If red tape is defined as “burdensome administrative rules and procedures that have negative effects on an organization’s effectiveness”, how would you assess the level of red tape in Organization Y’s promotion procedure?’. In line with existing red tape research (e.g. Bozeman and Feeney 2011), we used a scale ranging from 0 (‘almost no red tape’) to 10 (‘great deal of red tape’).

Given the potential problems with this general red tape item (Feeney 2012), we also used another item to measure the degree of red tape. Since our text is a promotion procedure that relates to all employees, we adapted the personnel red tape item about promotion from Rainey et al. (1995, 574) as follows: ‘This promotion procedure makes it hard for a good employee to move up faster than a poor one in Organization Y.’ We used a 5-point Likert scale with response categories that ranged from ‘strongly disagree’ to ‘strongly agree’.

ANOVA tests showed that the manipulation was successful. Respondents in the treatment group indeed reported a significantly higher degree of general red tape than respondents in the control group ($M_{Treatment} = 7.44$, $SD = 2.22$; $M_{Control} = 3.48$, $SD = 2.52$; $F = 98.00$, $p < .001$). Furthermore, the treatment group

Table 2. Measurement of procedural satisfaction.

Items	Factor loadings
How satisfied are you with this promotion procedure overall?	.927
How satisfied are you with the length of this promotion procedure?	.864
How satisfied are you with this promotion procedure compared to your expectations about a promotion procedure?	.945
How satisfied are you with this promotion procedure compared to an ideal promotion procedure?	.928

reported higher personnel red tape (focused on promotion) than the control group ($M_{Treatment} = 3.15$, $SD = 1.21$; $M_{Control} = 2.44$, $SD = 1.05$; $F = 13.48$, $p < .001$).

Results

Hypothesis 1 states that red tape will have a negative effect on procedural satisfaction. The results provide clear support for this hypothesis. Respondents in the control group (low red tape) assessed the procedural satisfaction of the promotion procedure with a mean of 3.51 ($SD = 0.87$) on a scale of 1–5. By contrast, the treatment group (high red tape) rated a far lower level of satisfaction, averaging 2.47 ($SD = 1.06$). This difference is highly significant ($F(1,137) = 39.751$, $p < .001$, partial $\eta^2 = .225$).

In order to test the moderating effects of managerial position and political ideology, we specified two hierarchical regression models, which are shown in Table 3. Using these regression analyses, we can analyse whether a combination of factors impact red tape.

In Model 1, we include the main effects of red tape (control = 0 or treatment = 1), managerial position, and political ideology on procedural satisfaction. In the second model, the interaction effects are added. We calculate the adjusted R^2 for both model specifications and determine which model explains the most variance (adjusted for the number of variables). In the first model (main effects only), the adjusted R^2 is .220. Since managerial position and political ideology have no significant relationship with procedural satisfaction, most of the variance is explained by the negative effect of red tape on satisfaction (in line with Hypothesis 1). Adding the interaction effects in the second model increases the adjusted R^2 to .243. The interaction between red tape and managerial position is – as expected – positive, but insignificant. Although the results are consistently in line with our predictions, effect sizes are small and fail to be significant ($\beta = .074$, $p > .05$). As a result, hypothesis 2 is not supported. This result is also shown graphically in Figure 1, as the dashed lines for managers are above the solid lines for non-managers for satisfaction.

By contrast, hypothesis 3 is supported, as we find a significant interaction effect between red tape and political ideology on procedural satisfaction ($\beta = -.176$, $p < .05$). Hence, the negative effect of red tape on procedural satisfaction is stronger for more politically conservative individuals than it is for people who are more

Table 3. Hierarchical regression analyses for variables predicting procedural satisfaction.

	Procedural satisfaction	
	Model 1 – Control or treatment	Model 2 – Adding managerial position and political ideology interaction
Red tape	–.486**	–.474**
Managerial position	.067	.082
Political ideology	–.092	–.114
Red tape and managerial position	–	.074
Red tape and political ideology	–	–.176*
Adjusted R^2	.220**	.243**

Standardized beta coefficients are presented and reported in bold if significant. * $p < .05$, ** $p < .01$.

The following criteria are met (based on Field 2009).

Criterion of no multicollinearity (No VIF values above 10 and average close to 1). No exclusion of influential outlying cases was required (using case wise diagnostics: $<5\%$ above standardized residual $>|2|$, Cook's distance $< .01$ (criterion < 1). Criteria of homoscedasticity and normality met.

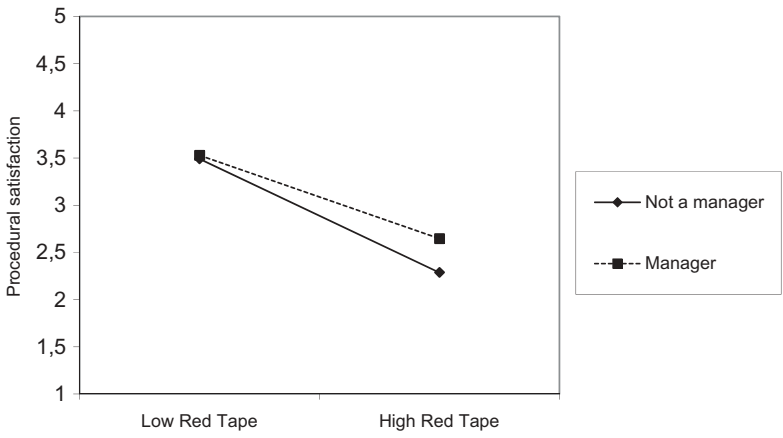


Figure 1. Main effect of red tape on procedural satisfaction. No significant interaction effect with managerial position present.

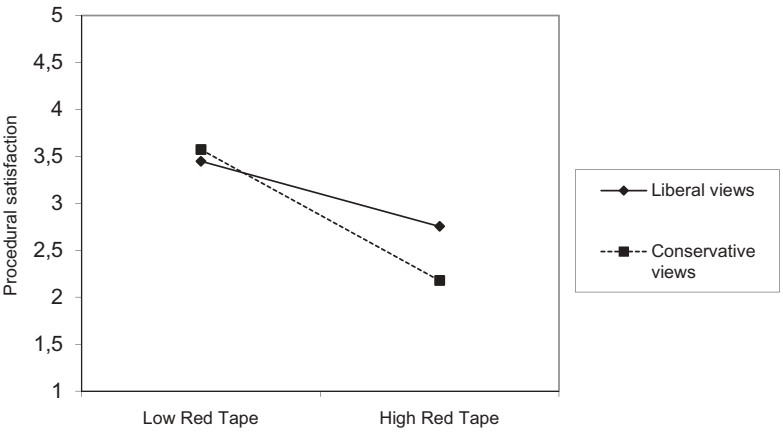


Figure 2. Main effect of red tape on procedural satisfaction. Significant interaction effect with political ideology present.

liberal. This finding is supported by [Figure 2](#), which shows that while both conservatives and liberals are quite satisfied in the low red tape scenario, conservatives are slightly more satisfied. In the high red tape situation, both groups are less satisfied, but the effect of red tape on satisfaction is much more pronounced for conservatives than liberals.

Discussion

Building on the replication typology put forward by Tsang and Kwan (1999), our study aims to generalize and extend the Tummers et al. (2016) experiment on the negative effect of red tape on procedural satisfaction. Specifically, we extend the Tummers et al. (2016) study by using a different country (the United States versus the Netherlands), population (online versus students), and setting (an organizational

promotion procedure versus a citizen passport renewal procedure). Furthermore, we include two different moderators that may affect the negative effect of red tape on satisfaction in our particular context, namely managerial position and political ideology (instead of knowledge of politics and emotional reactance).

We find that higher levels of red tape are indeed associated with lower perceived procedural satisfaction. Furthermore, our results show evidence for an interaction effect between red tape and political orientation, as more politically conservative individuals perceive lower levels of satisfaction. Yet, we do not find evidence for a significant interaction between red tape and managerial position. In sum, we were able to both replicate and extend the negative effect of red tape on satisfaction in a different setting. On the one hand, these findings imply that the main negative effect of red tape on satisfaction seems quite robust. On the other hand, we have also identified a need for future studies to further tease out the (contextual) specifics of the relationship between red tape and satisfaction.

In addition to these theoretical findings, we also show how the crowdsourcing service Amazon's MTurk can be used effectively for experimental public administration research. Using a relatively small budget, we were able to get a diverse sample of participants for our study. This platform does not only offer much potential for testing and administering novel experiments, but is also a convenient and low cost option for replication studies. Crowdsourcing studies are already common in other research domains such as psychology and political science, and hopefully this study will serve as a stepping stone for future crowdsourcing studies in public administration research.

Before discussing the implications of this research, it is important to note some limitations of the current study at this point. First, the experimental design consisted of a single stylized organizational promotion procedure, which raises concerns about external validity. Second, in this study, we only focus on red tape effects. Future research may want to incorporate both antecedents and consequences of red tape in a single experimental design. Third, the current study could be extended to take into account different stakeholder groups. For example, given its exploratory nature, our experimental design did not include separate manager and employee roles. By explicitly assigning different roles to participants, future studies can account for the stakeholder specific nature of red tape.

More generally, this study shows that integrating concepts from other disciplines, such as management and psychology, can help broaden the depth and scope of red tape research (see also Grimmelikhuijsen et al., [forthcoming](#)). These interdisciplinary studies need not be limited to procedural satisfaction. Indeed, organizational psychology concepts such as vitality (Kark and Carmeli 2009), work engagement (Schaufeli, Bakker, and Salanova 2006), and flow (Csikszentmihalyi 1997; Salanova, Bakker, and Llorens 2006) offer much potential for enhancing our understanding of red tape. In this light, the concept of work engagement seems especially interesting, as some research argues that work engagement leads to lower red tape (Torenvlied and Akkerman 2012), while others suggest that red tape leads to lower work engagement (Bakker et al. 2007).

Concluding, our study highlights the pathological nature of red tape as it negatively affects procedural satisfaction, particularly so for people who are more politically conservative. An extensive and diverse literature in consumer research, management, psychology, and public administration has shown that

satisfaction has important implications for both organizational performance and an individual's levels of motivation and trust. At an abstract level, firms that are unable to satisfy their clients' needs eventually go bankrupt, while public agencies with poor citizen satisfaction ratings face budget cuts or reorganizations. Employees that feel dissatisfied with their job become demotivated, which can result in absenteeism, an increased number of errors, and getting transferred to another position. Our findings imply that high red tape procedures play part in (dis)satisfaction assessments. As a result, (re-)designing rules to arrive at the lowest overall amount of red tape can mitigate the negative effect of red tape on satisfaction and subsequently yield substantial benefits for all rule stakeholders involved.

Disclosure statement

No potential conflict of interest was reported by the authors.

Notes on contributors

Wesley Kaufmann is an assistant professor of accounting at the faculty of economics and business at the University of Groningen and a research fellow at Arizona State University. His research focuses on rule evolution, Europeanization, and red tape.

Lars Tummers is an associate professor of public management at the Utrecht School of Governance and a research fellow at Arizona State University. His main research interests are public management, leadership and government-citizen relations. Related to this, he is developing an interdisciplinary field combining psychology and public administration, called *Behavioral Public Administration*.

References

- Bakker, A. B., J. J. Hakanen, E. Demerouti, and D. Xanthopoulou. 2007. "Job Resources Boost Work Engagement, Particularly When Job Demands are High." *Journal of Educational Psychology* 99 (2): 274–284. doi:10.1037/0022-0663.99.2.274.
- Baumgartner, J. C., and J. S. Morris. 2009. "MyFaceTube Politics: Social Networking Web Sites and Political Engagement of Young Adults." *Social Science Computer Review* 28 (1): 24–44. doi:10.1177/0894439309334325.
- Bergman, M. E., R. D. Langhout, P. A. Palmieri, L. M. Cortina, and L. F. Fitzgerald. 2002. "The (un) Reasonableness of Reporting: Antecedents and Consequences of Reporting Sexual Harassment." *Journal of Applied Psychology* 87 (2): 230–242. doi:10.1037/0021-9010.87.2.230.
- Berinsky, A. J., G. A. Huber, and G. S. Lenz. 2012. "Evaluating Online Labor Markets for Experimental Research: Amazon.com's Mechanical Turk." *Political Analysis* 20 (3): 351–368. doi:10.1093/pan/mpr057.
- Bozeman, B. 1993. "A Theory of Government 'Red Tape.'" *Journal of Public Administration Research and Theory* 3 (3): 273–304.
- Bozeman, B. 2000. *Bureaucracy and Red Tape*. Upper Saddle River, NJ: Prentice Hall.
- Bozeman, B. 2012. "Multidimensional Red Tape: A Theory Coda." *International Public Management Journal* 15 (3): 245–265. doi:10.1080/10967494.2012.725283.
- Bozeman, B., and D. M. Anderson. 2016. "Public Policy and the Origins of Bureaucratic Red Tape: Implications of the Stanford Yacht Scandal." *Administration & Society* 48 (6): 736–759.
- Bozeman, B., and M. K. Feeney. 2011. *Rules and Red Tape: A Prism for Public Administration Theory and Research*. Armonk, NY: M.E. Sharpe.

- Bozeman, B., and G. Kingsley. 1998. "Risk Culture in Public and Private Organizations." *Public Administration Review* 58 (2): 109–118. doi:[10.2307/976358](https://doi.org/10.2307/976358).
- Bozeman, B., P. N. Reed, and P. Scott. 1992. "Red Tape and Task Delays in Public and Private Organizations." *Administration & Society* 24 (3): 290–322. doi:[10.1177/009539979202400302](https://doi.org/10.1177/009539979202400302).
- Bozeman, B., and P. Scott. 1996. "Bureaucratic Red Tape and Formalization: Untangling Conceptual Knots." *The American Review of Public Administration* 26 (1): 1–17. doi:[10.1177/027507409602600101](https://doi.org/10.1177/027507409602600101).
- Brewer, G. A., and G. A. Brewer Jr. 2011. "Parsing Public/Private Differences in Work Motivation and Performance: An Experimental Study." *Journal of Public Administration Research and Theory* 21 (Suppl. 3): i347–362. doi:[10.1093/jopart/mur030](https://doi.org/10.1093/jopart/mur030).
- Brewer, G. A., R. M. Walker, B. Bozeman, C. N. Avellaneda, and G. A. Brewer Jr. 2012. "External Control and Red Tape: The Mediating Effects of Client and Organizational Feedback." *International Public Management Journal* 15 (3): 288–314.
- Buhrmester, M., T. Kwang, and S. D. Gosling. 2011. "Amazon's Mechanical Turk: A New Source of Inexpensive, Yet High-Quality, Data?" *Perspectives on Psychological Science* 6 (1): 3–5. doi:[10.1177/1745691610393980](https://doi.org/10.1177/1745691610393980).
- Cohen, T. A., A. T. Panter, and N. Turan. 2013. "Predicting Counterproductive Work Behavior from Guilt Proneness." *Journal of Business Ethics* 114 (1): 45–53. doi:[10.1007/s10551-012-1326-2](https://doi.org/10.1007/s10551-012-1326-2).
- Conover, P. J., and S. Feldman. 1981. "The Origins and Meaning of Liberal/Conservative Self-Identifications." *American Journal of Political Science* 25 (4): 617–645. doi:[10.2307/2110756](https://doi.org/10.2307/2110756).
- Csikszentmihalyi, M. 1997. *Flow and the Psychology of Discovery and Invention*. New York: Harper Perennial.
- Cyert, R. M., and J. G. March. 1963. *A Behavioral Theory of the Firm*. Englewood Cliffs, NJ: Prentice Hall.
- DeHart-Davis, L., and S. K. Pandey. 2005. "Red Tape and Public Employees: Does Perceived Rule Dysfunction Alienate Managers?" *Journal of Public Administration Research and Theory* 15 (1): 133–148. doi:[10.1093/jopart/mui007](https://doi.org/10.1093/jopart/mui007).
- Farrell, D. 1983. "Exit, Voice, Loyalty and Neglect as Responses to Job Dissatisfaction: A Multidimensional Scaling Study." *Academy of Management Journal* 26 (4): 596–607. doi:[10.2307/255909](https://doi.org/10.2307/255909).
- Feeney, M. K. 2012. "Organizational Red Tape: A Measurement Experiment." *Journal of Public Administration Research and Theory* 22 (3): 427–444. doi:[10.1093/jopart/mus002](https://doi.org/10.1093/jopart/mus002).
- Feeney, M. K., and B. Bozeman. 2009. "Stakeholder Red Tape: Comparing Perceptions of Public Managers and their Private Consultants." *Public Administration Review* 69 (4): 710–726. doi:[10.1111/puar.2009.69.issue-4](https://doi.org/10.1111/puar.2009.69.issue-4).
- Fornell, C., M. D. Johnson, E. W. Anderson, J. Cha, and B. E. Bryant. 1996. "The American Customer Satisfaction Index: Nature, Purpose, and Findings." *Journal of Marketing* 60 (4): 7–18. doi:[10.2307/1251898](https://doi.org/10.2307/1251898).
- Germine, L., K. Nakayama, B. C. Duchaine, C. F. Chabris, G. Chatterjee, and J. B. Wilmer. 2012. "Is the Web as good as the Lab? Comparable Performance from Web and Lab in Cognitive/Perceptual Experiments." *Psychonomic Bulletin & Review* 19 (5): 847–857. doi:[10.3758/s13423-012-0296-9](https://doi.org/10.3758/s13423-012-0296-9).
- Giauque, D., A. Ritz, F. Varone, and S. Anderfuhren-Biget. 2012. "Resigned but Satisfied: The Negative Impact of Public Service Motivation and Red Tape on Work Satisfaction." *Public Administration* 90 (1): 175–193. doi:[10.1111/j.1467-9299.2011.01953.x](https://doi.org/10.1111/j.1467-9299.2011.01953.x).
- Gilliland, S. W., L. Benson III, and D. H. Schepers. 1998. "A Rejection Threshold in Justice Evaluations: Effects on Judgment and Decision-making." *Organizational Behavior and Human Decision Processes* 76 (2): 113–131. doi:[10.1006/obhd.1998.2801](https://doi.org/10.1006/obhd.1998.2801).
- Grimmelikhuijsen, S., S. Jilke, A. Leth Olsen, and L. Tummers. Forthcoming. "Behavioral Public Administration: Combining Insights from Public Administration and Psychology." *Public Administration Review*.
- Groeneveld, S., L. G. Tummers, B. Bronkhorst, T. Ashikali, and S. Van Thiel. 2015. "Quantitative Methods in Public Administration: Their Use and Development Through Time." *International Public Management Journal* 18 (1): 61–86.
- Inbar, Y., D. Pizarro, R. Iyer, and J. Haidt. 2012. "Disgust Sensitivity, Political Conservatism, and Voting." *Social Psychological and Personality Science* 3 (5): 537–544. doi:[10.1177/1948550611429024](https://doi.org/10.1177/1948550611429024).

- Jacoby, W. G. 2000. "Issue Framing and Public Opinion on Government Spending." *American Journal of Political Science* 44 (4): 750–767. doi:10.2307/2669279.
- James, O. 2009. "Evaluating the Expectations Disconfirmation and Expectations Anchoring Approaches to Citizen Satisfaction with Local Public Services." *Journal of Public Administration Research and Theory* 19 (1): 107–123. doi:10.1093/jopart/mum034.
- Jilke, S., G. G. Van Ryzin, and S. Van de Walle. 2016. "Responses to Decline in Marketized Public Services: An Experimental Evaluation of Choice Overload." *Journal of Public Administration Research and Theory* 26 (3): 421–432.
- Jost, J. T., and D. M. Amodio. 2012. "Political Ideology as Motivated Social Cognition: Behavioral and Neuroscientific Evidence." *Motivation and Emotion* 36 (1): 55–64. doi:10.1007/s11031-011-9260-7.
- Jost, J. T., J. Glaser, A. W. Kruglanski, and F. J. Sulloway. 2003. "Political Conservatism as Motivated Social Cognition." *Psychological Bulletin* 129 (3): 339–375. doi:10.1037/0033-2909.129.3.339.
- Kark, R., and A. Carmeli. 2009. "Alive and Creating: The Mediating Role of Vitality and Aliveness in the Relationship Between Psychological Safety and Creative Work Involvement." *Journal of Organizational Behavior* 30 (6): 785–804. doi:10.1002/job.v30:6.
- Kaufman, H. 1977. *Red Tape: Its Origins, Uses and Abuses*. Washington, DC: The Brookings Institution.
- Kaufmann, W., and M. K. Feeney. 2012. "Objective Formalization, Perceived Formalization, and Perceived Red Tape." *Public Management Review* 14 (8): 1195–1214. doi:10.1080/14719037.2012.662447.
- Kaufmann, W., and M. K. Feeney. 2014. "Beyond the Rules: The Effect of Outcome Favourability on Red Tape Perceptions." *Public Administration* 92 (1): 178–191. doi:10.1111/padm.2014.92.issue-1.
- Kaufmann, W., and A. van Witteloostuijn. 2016. "Do Rules Breed Rules? Vertical Rule-making Cascades at the Supranational, National, and Organizational Level." *International Public Management Journal* 1–26. doi:10.1080/10967494.2016.1143420.
- Lavertu, S., and D. P. Moynihan. 2013. "Agency Political Ideology and Reform Implementation: Performance Management in the Bush Administration." *Journal of Public Administration Research and Theory* 23 (3): 521–549. doi:10.1093/jopart/mus026.
- Lee, G., J. Benoit-Bryan, and T. P. Johnson. 2012. "Survey Research in Public Administration: Assessing Mainstream Journals with a Total Survey Error Framework." *Public Administration Review* 72 (1): 87–97. doi:10.1111/j.1540-6210.2011.02482.x.
- Leventhal, G. S. 1980. "What Should Be Done with Equity Theory? New Approaches to the Study of Fairness in Social Relationships." In *Social Exchange: Advances in Theory and Research*, edited by K. J. Gergen, M. S. Greenberg, and R. H. Willis, 27–55. New York: Plenum.
- Moynihan, D. P., and P. Herd. 2010. "Red Tape and Democracy: How Rules Affect Citizenship Rights." *The American Review of Public Administration* 40 (6): 654–670. doi:10.1177/0275074010366732.
- Moynihan, D. P., and S. K. Pandey. 2007. "The Role of Organizations in Fostering Public Service Motivation." *Public Administration Review* 67: 40–53. doi:10.1111/puar.2007.67.issue-1.
- Nosek, B. A., and D. Lakens. 2014. "Registered Reports: A Method to Increase the Credibility of Published Results." *Social Psychology* 45: 137–141. doi:10.1027/1864-9335/a000192.
- Pandey, S. K., and S. Bretschneider. 1997. "The Impact of Red Tape's Administrative Delay on Public Organizations' Interest in New Information Technologies." *Journal of Public Administration Research and Theory* 7 (1): 113–130. doi:10.1093/oxfordjournals.jpart.a024335.
- Pandey, S. K., and G. A. Kingsley. 2000. "Examining Red Tape in Public and Private Organizations: Alternative Explanations from a Social Psychological Model." *Journal of Public Administration Research and Theory* 10 (4): 779–800. doi:10.1093/oxfordjournals.jpart.a024291.
- Pandey, S. K., and J. Marlowe. 2015. "Assessing Survey-Based Measurement of Personnel Red Tape with Anchoring Vignettes." *Review of Public Personnel Administration* 35 (3): 215–237.
- Pandey, S. K., and P. G. Scott. 2002. "Red Tape: A Review and Assessment of Concepts and Measures." *Journal of Public Administration Research and Theory* 12 (4): 553–580. doi:10.1093/oxfordjournals.jpart.a003547.
- Peer, E., J. Vosgerau, and A. Acquisti. 2014. "Reputation as a Sufficient Condition for Data Quality on Amazon Mechanical Turk." *Behavior Research Methods* 46 (4): 1023–1031.
- Perry, J. L. 1997. "Antecedents of Public Service Motivation." *Journal of Public Administration Research and Theory* 7 (2): 181–197. doi:10.1093/oxfordjournals.jpart.a024345.

- Pfeffer, J. 1992. *Managing with Power: Politics and Influence in Organizations*. Boston, MA: Harvard Business School Press.
- Piotrowski, S. J., and G. G. van Ryzin. 2007. "Citizen Attitudes toward Transparency in Local Government." *The American Review of Public Administration* 37 (3): 306–323. doi:10.1177/0275074006296777.
- Quratulain, S., and A. K. Khan. 2015. "Red Tape, Resigned Satisfaction, Public Service Motivation, and Negative Employee Attitudes and Behaviors: Testing a Model of Moderated Mediation." *Review of Public Personnel Administration* 35 (4): 307–332.
- Rainey, H. G., S. K. Pandey, and B. Bozeman. 1995. "Research Note: Public and Private Managers' Perceptions of Red Tape." *Public Administration Review* 55 (6): 567–574. doi:10.2307/3110348.
- Ross, L. D., Y. Lelkes, and A. G. Russell. 2012. "How Christians Reconcile their Personal Political Views and the Teachings of their Faith: Projection as a Means of Dissonance Reduction." *Proceedings of the National Academy of Sciences* 109 (10): 3616–3622. doi:10.1073/pnas.1117557109.
- Rudolph, T. J., and J. Evans. 2005. "Political Trust, Ideology, and Public Support for Government Spending." *American Journal of Political Science* 49 (3): 660–671. doi:10.1111/ajps.2005.49.issue-3.
- Salanova, M., A. B. Bakker, and S. Llorens. 2006. "Flow at Work: Evidence for an Upward Spiral of Personal and Organizational Resources." *Journal of Happiness Studies* 7 (1): 1–22. doi:10.1007/s10902-005-8854-8.
- Schaufeli, W. B., A. B. Bakker, and M. Salanova. 2006. "The Measurement of Work Engagement with a Short Questionnaire: A Cross-National Study." *Educational and Psychological Measurement* 66 (4): 701–716. doi:10.1177/0013164405282471.
- Schneider, D. S., and B. C. Vaught. 1993. "A Comparison of Job Satisfaction Between Public and Private Sector Managers." *Public Administration Quarterly* 17 (1): 68–83.
- Scott, P. G., and S. K. Pandey. 2000. "The Influence of Red Tape on Bureaucratic Behavior: An Experimental Simulation." *Journal of Policy Analysis and Management* 19 (4): 615–633. doi:10.1002/(ISSN)1520-6688.
- Sibley, C. G., D. Osborne, and J. Duckitt. 2012. "Personality and Political Orientation: Meta-Analysis and Test of a Threat-Constraint Model." *Journal of Research in Personality* 46 (6): 664–677. doi:10.1016/j.jrp.2012.08.002.
- Skitka, L. J., and P. E. Tetlock. 1993. "Providing Public Assistance: Cognitive and Motivational Processes underlying Liberal and Conservative Policy Preferences." *Journal of Personality and Social Psychology* 65 (6): 1205–1223. doi:10.1037/0022-3514.65.6.1205.
- Steel, B. S., and R. L. Warner. 1990. "Job Satisfaction among Early Labor Force Participants: Unexpected Outcomes in Public and Private Sector Comparisons." *Review of Public Personnel Administration* 10 (3): 4–22. doi:10.1177/0734371X9001000302.
- Torenvlied, R., and A. Akkerman. 2012. "Effects of Managers' Work Motivation and Networking Activity on their Reported Levels of External Red Tape." *Journal of Public Administration Research and Theory* 22 (3): 445–471. doi:10.1093/jopart/mur076.
- Townsend, D., and K. Kosloski. 2002. "Factors Related to Client Satisfaction with Community-Based Respite Services." *Home Health Care Services Quarterly* 21 (3–4): 89–106. doi:10.1300/J027v21n03_05.
- Tsang, E. W. K., and K. Kwan. 1999. "Replication and Theory Development in Organizational Science: A Critical Realist Perspective." *Academy of Management Review* 24 (4): 759–780.
- Tummers, L., U. Weske, R. Bouwman, and S. Grimmelikhuijsen. 2016. "The Impact of Red Tape on Citizen Satisfaction: An Experimental Study." *International Public Management Journal* 19 (3): 320–341.
- Van Ryzin, G. G. 2004. "Expectations, Performance, and Citizen Satisfaction with Urban Services." *Journal of Policy Analysis and Management* 23 (3): 433–448. doi:10.1002/(ISSN)1520-6688.
- Van Ryzin, G. G. 2006. "Testing the Expectancy Disconfirmation Model of Citizen Satisfaction with Local Government." *Journal of Public Administration Research and Theory* 16 (4): 599–611. doi:10.1093/jopart/mui058.
- Van Ryzin, G. G., and S. Immerwahr. 2007. "Importance-Performance Analysis of Citizen Satisfaction Surveys." *Public Administration* 85 (1): 215–226. doi:10.1111/padm.2007.85.issue-1.

- van Witteloostuijn, A., and G. de Jong. 2010. "Ecology of National Rule Birth: A Longitudinal Study of Dutch Higher Education Law, 1960-2004." *Journal of Public Administration Research and Theory* 20 (1): 187-213. doi:10.1093/jopart/mup004.
- Waldo, D. 1946. "Government by Procedure." In *Elements of Public Administration*, edited by E. M. Marx, 381-399. Eaglewood Cliffs, NJ: Prentice Hall.
- Wright, B. E. 2001. "Public-Sector Work Motivation: A Review of the Current Literature and a Revised Conceptual Model." *Journal of Public Administration Research and Theory* 11 (4): 559-586. doi:10.1093/oxfordjournals.jpart.a003515.

Appendix

Text of red tape vignettes

Low Red Tape

Organization Y has introduced a new promotion procedure.

The procedure consists of a number of steps. These steps relate to the promotion procedure of a single employee. We will present these steps to you below.

Hereafter, you will be asked some questions about what you think of this procedure.

Step 1: Draft of Yearly Development Plan

At the start of the year, the employee writes down a number of goals for the following year in a *Yearly Development Plan* and sends this Plan to his /her supervisor. The supervisor may add new goals or adjust the goals formulated by the employee.

This step takes half an hour.

Step 2: Evaluation of Yearly Development Plan

At the end of the year, the employee and supervisor discuss to what extent the goals outlined in the *Yearly Development Plan* have been achieved during a face-to-face meeting. After the meeting, the supervisor decides whether or not to promote the employee.

This step takes half an hour.

High Red Tape

Start of the year

Step 1: First draft of Yearly Development Plan

At the start of the year, the employee submits a first draft of the *Yearly Development Plan*, describing the employee's general development goals (1,000–1,500 words in total).

This step takes two hours

Step 2: First draft of Project Development Plans

In addition to the *Yearly Development Plan*, the employee also has to fill out *Project Development Plans*. These specify goals for the employee's three most important projects (1,000–1,500 words in total).

This step takes two hours.

Step 3: Discussion of Plans

The employee discusses the *Yearly Development Plan* and *Project Development Plans* with his /her supervisor.

This step takes two hours.

Step 4: Finalizing Plans

Based on the outcomes of the meeting with his /her supervisor, the employee submits final versions of the *Yearly Development Plan* and *Project Task Development Plans*.

This step takes two hours.

End of the year

Step 5: Self-evaluation of Yearly Development Plan

The employee rates his /her performance for all goals outlined in the *Yearly Development Plan* (500–1,000 words in total).

This step takes two hours.

Step 6: Self-evaluation of Project Task Development Plans

The employee rates his /her performance for all goals outlined in the *Project Task Development Plans* (500–1,000 words in total).

This step takes two hours.

Step 7: Supervisor evaluation of Plans

The supervisor rates the employee's performance for all goals outlined in the *Yearly Development Plan* and *Project Development Plans* (1,000–1,500 words in total).

This step takes two hours.

Step 8: Promotion decision

All evaluations are sent to an internal promotion committee. This committee, which consists of three directors from divisions other than employee's own division, reviews the Plans and their evaluations and decide on promotion.

This step takes two hours.